

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A method for operating a transmitter to transmit a signal at an output power level, comprising:

coupling to an external power meter to receive a first ~~measured~~ external output power level of the transmitter;

measuring a ~~second-measured~~ first internal output power level of the transmitter with an integrated monitor;

determining a correlation between external and internal output power levels from the first ~~and second-measured~~ external output power level and the first internal output power level;

storing the correlation in memory; ~~and~~

decoupling from the external power meter;

measuring a second internal output power level that represents a digital value with the integrated monitor;

determining a second external output power level from the second internal output power level and the correlation; and

adjusting an output power of the transmitter when the second external output power level is unacceptable.

Claim 2 (currently amended): The method as in claim 1, wherein the digital value is selected from the group consisting of a digital zero and a digital one, further comprising:

determining the output power of the transmitter, based on the correlation.

Claim 3 (currently amended): The method as in claim [[2]] 1, further comprising:

changing the temperature of the transmitter and repeat said measuring a second internal output power level, said determining from the correlation, and said adjusting an output power.

Claim 4 (canceled).

Claim 5 (currently amended): The method as in claim [[2]] 1, wherein the correlation is stored as a lookup table in which

the internal output power level measured by the monitor is the index value, and

the corresponding value is the external output power level measured by the external meter.

Claim 6 (currently amended): The method as in claim [[2]] 1, wherein the memory is integrated with the transmitter.

Claim 7 (currently amended): The method as in claim [[2]] 1, wherein the memory is external to the transmitter.

Claim 8 (currently amended): A transmitter, comprising:

a light source;

a transmission driver driving the light source;

a monitor integrated with the transmitter that receives light from the light source and generates a power indicator corresponding to the power of the light source; ~~and~~

a controller that:

controls the transmission driver,

receives the power indicator from the monitor,

receives the power measured by an external power meter,

compares the power indicator from the monitor to the power measured by the external power meter, and

determines the correlation between the power indicator and the power measured;
and

a pattern generator in communication with the transmission driver and controlled by the controller, that generates signal patterns to send to the transmission driver.

Claim 9 (original): The transmitter as in claim 8, further comprising:

a memory device in communication with the controller, for storing the correlation determined by the controller.

Claim 10 (original): The transmitter as in claim 8, wherein the transmitter includes an optical transmitter.

Claim 11 (currently amended): The transmitter as in claim 8, wherein the controller further:

causes the pattern generator to generate a pattern having a digital value;

determines a power that would be measured by the external power meter from the power indicator and the correlation; and

adjusts an output power of the transmission driver when the power that would be measured is unacceptable.

~~further comprising:~~

~~a pattern generator in communication with the transmission driver and controlled by the controller, that generates signal patterns to send to the transmission driver.~~

Claim 12 (currently amended): The transmitter as in claim [[11]] 8, wherein the pattern generator is integrated into a chip with other circuitry in the transmitter.

Claims 13 to 16 (canceled).

Claim 17 (currently amended): A system, comprising:

a transmitter, comprising:

a light source;

a transmission driver driving the light source; and

a monitor integrated with the transmitter that receives light from the light source and generates a power indicator corresponding to the power of light source;

a controller that:

controls the transmission driver,

receives the power indicator from the monitor,

receives the power measured by an external power meter,

compares the power indicator from the monitor to the power measured by the external power meter, and

determines the correlation between the power indicator and the power measured;
and

a memory device in communication with the controller, for storing the correlation determined by the controller; and

a pattern generator in the transmitter that

generates signal patterns to send to the transmission driver, and

is controlled by the controller.

Claim 18 (original): The system as in 17, wherein the monitor is integrated with the transmitter.

Claim 19 (original): The system as in 17, wherein the memory device is located on a computer that is connected to the transmitter during characterization and programming.

Claim 20 (original): The system as in 17, wherein the controller is located on a computer that is connected to the transmitter during characterization and programming.

Claim 21 (currently amended): The system as in claim 17, wherein the controller further:

causes the pattern generator to generate a pattern having a digital value;

determines a power that would be measured by the external power meter from the power indicator and the correlation; and

adjusts an output power of the transmitter when the power that would be measured is unacceptable.

further comprising:

~~a pattern generator in the transmitter that~~

~~generates signal patterns to send to the transmission driver, and~~

~~is controlled by the controller.~~

Claim 22 (currently amended): The system as in claim [[21]] 17, wherein the pattern generator is integrated into a chip with other circuitry in the transmitter.

Claim 23 (new): The system as in claim 11, wherein the digital value is selected from the group consisting of a digital zero and a digital one.

Claim 24 (new): The system as in claim 21, wherein the digital value is selected from the group consisting of a digital zero and a digital one.